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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,113	06/15/2001	Shuo-Yen Robert Li	Li 4	9816

7590 03/21/2005
John T. Peoples
14 Blue Jay Court
Warren, NJ 07059

EXAMINER

KADING, JOSHUA A

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,113

Applicant(s)

LI ET AL.

Examiner

Joshua Kading

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-78 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-50 is/are allowed.
- 6) ☒ Claim(s) 40-43 and 51-78 is/are rejected.
- 7) ☒ Claim(s) 40, 42, 44, 48-51, 55, 58, 61, 64, 68, 70, 73, and 76-78 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-15-01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because line 3 states, "nonblocking components are used a building-blocks". This does not make sense. It is believed that applicant intended line 3 to state, --nonblocking components are used as building-blocks--. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities:

In the "Brief Description of the Drawings" section that begins on page 10 the following are informalities with respect to the figure descriptions:

Page 13, line 15, "FIG. 28A summarizes the paths of FIG. 27 to generate the guide" should be changed to --FIG. 28B summarizes the paths of FIG. 27 to generate the guide--.

Page 14, line 1, "FIG. 30A summarizes the paths of FIG. 24 to generate the guide" should be changed to --FIG. 30B summarizes the paths of FIG. 24 to generate the guide--.

Page 14, line 12, "FIGS. 33A-D" should be changed to --FIGS. 33A-F--.

Page 17, there is no description of FIGS. 56A-D. There should be a description of FIGS. 56A-D.

Appropriate correction is required.

Claim Objections

Claims 40, 42, 44, 48-51, 55, 58, 61, 64, 68, 70, 73, and 76-78 are objected to because of the following informalities:

Claim 40, claim 42, claim 44, claim 48, claim 49, claim 50, claim 51, claim 55, claim 58, claim 61, claim 64, claim 68, claim 70, claim 73, claim 76, claim 77, and claim 5 78 (read: all independent claims) should have a colon inserted after the word "comprising" at the end of the preamble of each claim.

Claim 40, line 2; claim 42, line 2; claim 51, lines 1-2; claim 64, lines 1-2; claim 68, lines 1-2 and 4; claim 77, line 2; and claim 78, line 2 state, "the representation". There is no antecedent basis for this claim limitation. Therefore, it is suggested "the 10 representation" be changed to --a representation--.

Claim 44, line 7; claim 48, line 6; claim 49, line 5; and claim 50, line 3; claim 55, line 3; claim 58, line 3; and claim 61, line 3 state, "the integers 1 to n". There is no antecedent basis for this claim limitation. Therefore, it is suggested "the integers 1 to n" be changed to --integers 1 to n--; the word "the" is simply deleted.

15 Claim 50, lines 5 and 7 state, "the preceding exchange" and "the succeeding exchange" respectively. There is no antecedent basis for either of these limitations. Therefore, it is suggested "the preceding exchange" be changed to --a preceding exchange-- and "the succeeding exchange" be changed to --a succeeding exchange--.

20 Claim 55, line 3; claim 58, line 3; claim 61, lines 3 and 5; claim 70, line 2; claim 73, line 2; and claim 76, lines 2 and 4 state, "the trace" or "the guide". There is no antecedent basis for these claim limitations. Therefore, it is suggested "the trace" be changed to --a trace-- and "the guide" be changed to --a guide--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

5 The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10 Claims 40-43 and 51-76 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

15 Regarding claims 40-43, 51-54, and 64-67, applicant discloses, "implementing the equivalent network as..." where the network is then described in a mathematical representation (see claim 40 for example). It is unclear however, from the claims and specification how one of ordinary skill in the art would actually implement the equivalent network to the "given network" with the information given. For instance in claim 40, how
20 does the applicant use "a permutation κ on integers from 1 to n " to arrive at the given representation of the equivalent network?

 Regarding claims 55-63, applicant discloses, "an extra input exchange induced by σ^{-1} " and "an extra output exchange induced by π ", where σ and π are permutations. How are an input exchange and an output exchange "induced" by the given
25 permutations?

Regarding claims 68-69, applicant discloses, "a second trace induced by a permutation" and "a second guide induced by a permutation". How are a trace and a guide "induced" by a permutation?

Regarding claims 70, 73, and 76, applicant discloses, "an extra input exchange induced by λ " and "an extra output exchange induced by π ", where λ and π are permutations. As with claims 55-63, how are an input exchange and an output exchange "induced" by the given permutations?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

10 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 40, 41, 51-54, 68, 69, 77, and 78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 40, 41, 51-54, 77, and 78, applicant discloses, for example, "k-stage bit-permuting network" in the preamble and "a permutation κ ". Do k and κ represent the same piece(s) of information? If not, it is recommended that a clear distinction be made between the two variables so that there is no confusion.

20 Regarding claims 68 and 69, applicant discloses, "input exchange X_λ " and "output exchange X_π ". It is unclear what elements "X" consist of. The element "X" is merely stated as a variable with no further definition or explanation.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims 44-47, 48, 49, and 50 are allowable because the prior art of record, in combination with the other claim limitations, fails to teach the use of a permutation for
5 “rearranging the preceding exchange and the succeeding exchange” of a given network for the purpose of “implementing the equivalent network so that a stage in the equivalent network corresponding to the identified stage has the rearranged preceding exchange and the rearranged succeeding exchange.”

10 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number
15 for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.
20 For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/882,113
Art Unit: 2661

Page 7

A handwritten signature in black ink, appearing to read 'Joshua Kading', with a stylized flourish at the end.

Joshua Kading
Examiner
Art Unit 2661

March 15, 2005

A handwritten signature in black ink, appearing to read 'Bob Phunkulh', with a stylized flourish at the end.
BOB PHUNKULH
PRIMARY EXAMINER